

REMARKS / ARGUMENTS

Claims 1-20 were filed in the original application.

Claims 1-12 of this group are rejected in the captioned Office Action. Rejection is based on the provisions of 35 U.S.C. 103(a) in view of the variously applied patents of Bosli and Terhaar et al. Rejection is also based on 35 U.S.C. 112, second paragraph in view of certain indefinite language appearing in several claims. In addition the Office Action notes objection to several of the pending claims and notes that claims 13-20 will be allowable upon correction of the related objections,

In response herein applicant amends each of the independent claims of the application and several dependent claims of the application. These amendments address each of the identified difficulties as well as additional problems noted during applicants' current review of the application. Applicant also submits herein three new claims dependent on amended independent claim 13.

Turning now to specific recitations in the Office Action, recitations considered in their order of Office Action appearance where possible, applicant requests reconsideration of the objection concerning the "is/are" wording in line 3 of claim 2; applicant believes the form "A and B are---" to be preferable over "A and B is---."

The language in claims 11 and 12 has been extensively revised herein and now includes the text suggested in the Office Action.

Similarly the language in claims 13 has been revised herein and now includes the "orthogonal to" text suggested in the Office Action.

The language of claims 1, 3, and 11 has also been extensively revised herein and is believed now free of indefinite wording. The amended independent claims are shown in the required flagged changes form and also in clean copy form herein, the latter being for convenience of the Examiner in view of the extensive changes accomplished in some claims.

With respect to the 35 U.S.C. 103(a) rejection of claims 1, 2, 4 and 5, applicant submits that the new language of claim 1 distinguishes over the asserted combination of the Bosli and Terhaar references in at least the following respects.

1. The "physical shock" claim preamble language has now been twice incorporated into the claim 1 body in order to distinguish positively over the absence of this concept in either of the combined two references.

2. The language of amended claim 1 now calls for the heat sink to have a "T stem body portion extending in transverse relationship with an aperture opening of said printed circuit board" notably such structure is not shown in the Bosli reference where the heat sink body clearly terminates above the printed circuit board. This structure is also not found in the Terhaar reference.

3. Claim 1 now calls for the heat sink arm portions to be "in intimate proximity with first surface portions of said printed circuit board". This structure is notably absent from the Bosli reference as well as being inappropriate for the Terhaar structure. The Bosli arms are separated from the printed circuit board by the semiconductor devices 3 and 4 as well as by the spring 7.

4. Claim 1 also now calls for a "semiconductor device reception area saddle region located intermediate said first and second pairs of integral T arm portions." Such structure is notably absent in the Bosli reference where the semiconductor devices are received on a flat surface below the arms. It also appears doubtful that the Terhaar semiconductor reception area is fairly identified as a "saddle region"; the language "cavity region" or "receptacle" appearing more appropriate to the disclosed structure.

5. Claim 1 also now calls for a "heat sink T stem body portion including a T stem body portion slot member (204) in alignment with a second surface of said printed circuit board --". No heat sink slot element is disclosed in the Bosli reference; the slot of the Bosli screws 9 are clearly distinguished in structure and function from applicants' slot. Moreover the Terhaar "slot" (i.e., groove 160) is perpendicular to the printed circuit board, clearly not aligned with a printed circuit board surface and is used for a totally different function than applicants' slot.


In addition to these claim distinctions, it is respectfully submitted that the solder or other solidified liquid attachment of semiconductor device to heat sink as recited in several of applicants' dependent claims is also distinguishing over the combined references. The only solder found in the combined references appears at 5 in the Bosli patent in the normal transistor to printed circuit board conductor attachment function.

The changes and remarks of explanation regarding claim 1 herein are respectfully submitted to also carry the claims dependent on claim 1, i.e., claims 2, 4, and 5, to the level of patentability with respect to 35 U.S.C. 103(a).

The 35 U.S.C. 112, second paragraph difficulties noted in claim 11 have also been addressed herein and the identified vague language corrected.

In view of the changes accomplished herein the application is believed to be in condition for allowance and passage to issuance. Such allowance and issuance at the earliest possible time are respectfully solicited.

Respectfully submitted,


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Attachments